WEST Search History

DATE: Monday, May 12, 2003

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	DB=USPT,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR		
L2	(gelatin or albumin) adj5 (stabiliz$) same (enzyme$)	82	L2
L1	(gelatin or albumin) same (stabiliz$) same (enzyme$)	677	L1

END OF SEARCH HISTORY

L2: Entry 30 of 82 File: USPT Dec 10, 1996

DOCUMENT-IDENTIFIER: US 5582698 A
TITLE: Sensor package

Detailed Description Text (35):
In the present invention, the platinum activated carbon is treated in a phosphate buffer formulation having a pH of about 7.5. The platinum activated carbon is added to the buffer to neutralize any sulfuric acid present from the formation of the platinized carbon powder particles. To the platinum activated carbon and buffer mixture a co-protein, such as bovine serum albumin, is added to adsorb onto the carbon. The bovine serum albumin is added to help stabilize the enzyme, such as glucose oxidase, as is known to those skilled in the art. A binder, such as a commercially available resin solution sold under product number 8101RS from Metech, is then added to the bovine serum albumin-platinum activated carbon mixture. The binder material, as noted above, acts to hold the components of the active layer together. To this mixture, a surfactant may be added to provide better printing flow characteristics when active layer 96 is screen printed upon conductive strip 66. An additional benefit of the surfactant is to act as a wetting agent for the sensor during use. The active layer 96 being comprised of a hydrophobic binder becomes difficult to wet with water after it is fully dried. The surfactant facilitates this wetup. The surfactant material used can be any liquid surfactant, known to those skilled in the art, which is water soluble and exhibits a hydrophilic lipophilic balance (HLB) in the range of 12-16. Typical surfactant materials for use in this regard can be alkylarylpolyether alcohols, such as alkylphenoxypolyethoxyethanol. One such material is sold under the trademark Triton.RTM. from Union Carbide Chemicals and Plastics Co., Inc., Danbury, Conn. The preferred material for use in the present application is Triton.RTM. X-100 surfactant (HLB 13.5). After these components are milled, a resin thinner may be added to adjust the active layer 96 viscosity for printing purposes. Typically, a petroleum solvent-based resin thinner is used to bring the paste viscosity within the range of between 10,000 to about 100,000 centipoise. Resin thinners for this purpose are commercially available as product number 8101 thinner from Metech. An enzyme, such as glucose oxidase or lactate oxidase, is then added to the mixture, and the final paste is screen printed upon conductive strip 66. Other enzymes may be similarly added to the mixture to prepare active layers specific for other analytes.

L2: Entry 33 of 82 File: USPT May 14, 1996

DOCUMENT-IDENTIFIER: US 5516647 A
**** See image for Certificate of Correction ****
TITLE: Compounds useful as alkaline phosphatase inhibitors and therapeutic agents

Detailed Description Text (142):
AP activity was determined with VP Bichromatic Analyzer (Abbott Laboratories) by monitoring the appearance of the yellow product, p-nitrophenol, produced as a result of the enzyme catalyzed hydrolysis of the colorless substrate, p-nitrophenylphosphate. The stock preparations of E. coli and human AP were diluted to 0.3-1.0 U/ml with 0.1M Tris buffer, pH 8.0, containing 1 mM magnesium chloride, 0.1 mM zinc chloride and 5 mg/ml bovine serum albumin. Bovine serum albumin has been shown to stabilize the AP without contributing any phosphatase activity {Nigam, V. N. et al. (1959) J. Biol. Chem. 234, 1550; Nigam, V. N. et al. (1959) J. Biol Chem. 234, 2394}. The diluted enzyme solutions were prepared fresh just before the start of the experiments. The final assay conditions for the human and E. coli AP were as follows:

L2: Entry 52 of 82 File: USPT Dec 24, 1991

DOCUMENT-IDENTIFIER: US 5075216 A
**** See image for Certificate of Correction ****
TITLE: Methods for DNA sequencing with thermus aquaticus DNA polymerase

Detailed Description Text (8):
The chain extension reaction conditions of the present sequencing method are especially preferred when carried out in a buffer compatible with PCR, as is discussed more fully below. The buffer (described by Saiki et al., 1988, Science 239:487-494) for Taq polymerase PCR reactions (50 mM KCl; 10 mM Tris-HCl, pH 8.4; 2.5 mM MgCl.sub.2 ; 200 .mu.M of each dNTP; and 200 .mu.g/mL of gelatin) was accordingly modified by the present inventors for DNA sequencing. The PCR buffer described by Saiki et al. contains KCl. For purposes of the present method, however, the best extensions occur in the absence of KCl. At 50 mM KCl there was slight inhibition of enzyme activity, and at .gtoreq.75 mM KCl, the activity of Taq DNA polymerase was significantly inhibited in the present method. The presence or absence of gelatin, which acts as an enzyme stabilizer in PCR reactions, did not affect the sequencing reactions per se; however, gelatin can cause distortions during electrophoresis. Addition of non-ionic detergents to the enzyme dilution buffer (final concentration of detergent in the sequencing reaction: 0.05% Tween 20 and 0.05% NP40) stimulated the activity of the Taq DNA polymerase and reduced the background caused by false terminations from the enzyme.

L2: Entry 64 of 82 File: USPT Jan 22, 1985

DOCUMENT-IDENTIFIER: US 4495285 A
**** See image for Reexamination Certificate ****
TITLE: Plasminogen activator derivatives

Brief Summary Text (6):
However, urokinase is unstable under certain conditions since it is an enzyme and loses its enzymatic activity, for example, in the course of extraction, isolation and purification from a urokinase-bearing raw material, for example, urine; during the lyophilization processing in preparing dosable formulations; during the heat treatment for deactivating viruses; or when it is placed in a diluted state in a dripping bottle and kept for a prolonged time period in such a diluted state at room temperature for clinical application. This physically unstable nature of urokinase has created a serious problem in preparing and formulating urokinase on an industrial scale or in actually using the same for clinical purposes. Human albumin has been employed as an additive to urokinase so as to improve its stability. However, this can be by no means a break-through solution to the problem just discussed because pure albumin, i.e. a globulin fraction, is difficult to obtain without immunogenic contamination; pure albumin is expensive; albumin and urokinase form a complex of a high molecular weight under virus deactivating conditions in which urokinase is subjected to heat treatment at 60.degree. C. for 10 hours together with albumin added to stabilize urokinase; and such stabilizer if added may be effective to a certain extent for protecting urokinase from losing its enzymatic activity upon the lyophilization but cannot prevent its loss of activity upon actual clinical use.

L2: Entry 68 of 82 File: USPT Dec 28, 1982

DOCUMENT-IDENTIFIER: US 4366243 A
TITLE: Stabilization of glucose oxidase apoenzyme

Brief Summary Text (15):
It is known that glutathione synthetase in very dilute solutions is relatively unstable, and it was suggested that bovine serum albumin could be used to stabilize enzyme in such dilute solutions. S. P. Colowick, et al., eds., "Methods in Enyzmology", Volume II, pages 342-346, Academic Press, Inc., New York (1955). See also Ibid., Volume IV, page 367 (1957).

L2: Entry 71 of 82 File: USPT Jul 17, 1979

DOCUMENT-IDENTIFIER: US 4161488 A
TITLE: Enzymatic substrates

Brief Summary Text (31):
Table 1 illustrates the usefulness of compounds of the present invention for determining thrombin and trypsin. Kinetic analysis of the compounds in Table 1 were carried out in pH 7.4, 0.1 potassium phosphate buffer with 0.1% gelatin to stabilize the enzymes used. Both purified trypsin and purified thrombin were utilized to obtain the indicated Michaelis-Menten kinetic constants. The analyses were performed with 0.16mM of 5,5'-dithiobis-(2-nitrobenzoic acid) in the reaction mixture and varying concentrations of enzymes as warranted by the turnover of the indicated substrate. The analyses were performed in a routine manner on an Abbott ABA-100 bichromatic analyzer with a 415-530 filter pair at 37.degree. C. or with a Varian "Superscan" double beam spectrophotometer at 412nM. No difference in kinetic constants were seen when proper corrections were made to account for the bichromatic nature of the ABA-100 or the system. In all cases, the observed values of enzyme hydrolyses were corrected to account for spontaneous hydrolyses.

L2: Entry 73 of 82 File: USPT Oct 3, 1978

DOCUMENT-IDENTIFIER: US 4118279 A
TITLE: Stabilizing agent for enzymes

Brief Summary Text (4):
This difficulty occurs especially when the enzyme preparation to be stabilized contains organic sulfhydryl compounds, such sulfhydryl compounds (SH compounds) being needed by many enzymes for activation. Furthermore, such SH compounds are frequently added to combined preparations as stabilizers and especially as oxidation protection agents, not only for some enzymes, but also for non-proteinaceous substances which are sensitive to oxidation. However, such SH compounds frequently lead to a denaturing of the enzymatically-inactive proteins, for example, serum albumin, added as stabilizing agents. This denaturing then leads to the appearance of the above-described turbidities.

Detailed Description Text (19):
The above-given comparative experimental values show that, without the addition of a stabilizing agent, a very rapid inactivation of the enzymes takes place. With the addition of the known stabilizing agent serum albumin, the enzymes can admittedly be well stabilized but a strong turbidity results due to denaturing of the stabilizing agent which, in the optical test, brings about a very high initial extinction. Because of this high initial extinction, exact values can no longer be measured with conventional photometers.

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L2: Entry 81 of 82 File: JPAB Jul 5, 1982

DOCUMENT-IDENTIFIER: JP 57108020 A
TITLE: STABLE KALLIDINOGENASE COMPOSITION AND ITS PREPARATION

Abstract Text (2):
CONSTITUTION: A kallidinogenase solution is mixed with less than the active amount of albumin (about 38g of albumin per 1,500,000 units of kallidinogenase) and a saccharide diluent (e.g. mannitol, lactose, sucrose, etc.), and the mixture is spray-dried at an inlet temperature of 110∼120°C, an outlet temperature of 50∼ 60°C, and the speed of spindle rotation of 20,000∼40,000rpm to obtain the objective stable kallidinogenase composition. Kallidinogenase is extremely unstable enzyme distributed widely in the living body. The lowering of the activity can be inhibited by using albumin as a stabilizer. The spray-drying is industrially advantageous as the final stage drying compared with the conventional freeze-drying.